King County
Department of Natural Resources and Parks
Water and Land Resources Division
Noxious Weed Control Program
206-296-0290 TTY Relay: 711

BEST MANAGEMENT PRACTICES
Giant Hogweed - *Heracleum mantegazzianum*
Apiaceae

Class A Noxious Weed

Description

- **Public health hazard** - sap can cause blistering and scarring of the skin.
- Tall, robust perennial with large flat-topped, **umbrella-shaped white flower clusters** at top of **stout, hollow stems** 2 to 4 inches in diameter with **dark reddish-purple blotches**.
- Reaches a height of **8 to 15 feet when in flower** and flower head can be up to 2.5 feet in diameter across its flat top.
- **Large compound leaves are deeply incised and 3 to 5 feet wide**. Hairs on the underside of the leaf are stiff, dense and stubby (only about 0.25 mm long) and leaf stalks have short, coarse white hairs at the base.
- Seeds are in 3/8-inch, elliptic dry fruits with swollen brown resin canals.
- Roots are large, tuberous and deep.
- **Resembles native plant cow parsnip** (*Heracleum lanatum*), which rarely exceeds 6 feet in height, has a flower cluster only 8 to 12 inches wide and has palmately lobed leaves. The hairs on the underside of the leaf are soft, wavy, shiny, and are about 1 mm long, making the leaves woolly below.

Habitat

- Found in ravines, wooded open space areas between residential communities, roadside ditches, vacant lots, riparian areas and residential properties.
- Prefers moist soils.
- Grows in full shade to full sun but does best in partial shade.
- In King County, it is most commonly found in urban areas where it has escaped from gardens.

Reproduction

- Plants don't flower until the second, third or even fourth year. Some plants are monocarpic and die after flowering, others are perennials and flower for several years.
- In the Pacific Northwest, plants sprout in the early spring (or late winter in mild years) from the roots or from seed.
- By mid-April, mature plants are 3 to 4 feet tall and up to 3 feet wide. Seedlings are 1 to 1.5 feet tall with leaves that are much more palmate than the mature plant.
- By May, the mature plants start to bolt, sending a thick hollow stem up to a height of 8 to 15 feet.
- Flowering starts from mid May to mid June and lasts from several weeks to more than a month.
- Green fruits form by July, then turn dry and brown when they ripen.
- From late August through September the plants become senescent, dying back to the roots. The dried stalk and bare flower stems will persist through the fall and winter.
- Winged seeds are dispersed by water or soil movement.

Control Methods

The preferred method of control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The

goal is to maximize effective control and to minimize negative environmental, economic and social impacts.

Control methods should be multifaceted and adaptive, developed to reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

Management Plan

- **Avoid all skin contact with plant sap because it can cause burns, blisters and scarring**.
- Education of the dangers of exposure to the sap is essential to avoiding the negative impacts on the health of humans or animals. Provide the public with the tools to identify the plant and give technical assistance on control and eradication.
- Single, mature plants can be dug up if care is taken to remove at least 4 to 6 inches of root. Smaller plants can be pulled but root fragments are likely to re-sprout.
- Large, established infestations require several different control techniques to eliminate the larger mature plants as well as the seedlings and plants coming up from the seedbank.
- Control large plants either with herbicide or by digging them up. Control seedlings and young plants by applying the herbicide appropriate for the site or by carefully digging up all of the plants.
- Monitor the area for at least three years and repeat the control treatment as needed.
- Replace the hogweed with native species or grasses suited to the site, particularly on steep slopes and stream banks that need to be held in place by the roots of a healthy plant community.
- Disposal: Flowers and seedheads should be placed in a plastic garbage bag, sealed, and disposed of with your normal household trash or taken to a solid waste facility. If feasible, non-flowering plant parts can remain on site to decompose naturally.
- Transport of giant hogweed without a permit is prohibited under the WA State Quarantine Law (contact the King County Noxious Weed Control Program for information on disposing of and transporting hogweed).

Early Detection and Prevention

- Survey for hogweed in unmaintained urban open space areas and vacant lots especially ravines and areas near known infestations.
- Dig up isolated plants and return the following year to check for new seedlings and plants resprouting from root fragments.
- Carefully examine plants sold as cow parsnip; giant hogweed is sometimes misidentified and sold by nurseries and at local plant sales.

Manual

- Mature plants can be removed manually if at least the first 4-6 inches of the central root is dug up.
- Younger plants are more resilient and will be present in greater numbers in a dense, mature infestation. Both of these factors make manual removal of young plants more impractical.
- Seedlings can easily number in the hundreds and may break off when being pulled from more compacted soils, leaving the root to continue growing.

Mechanical

- Mowing will only be effective for short periods of time and will have to be repeated every two weeks. Some plants will continue to send up stronger and stronger resprouts even after being cut back repeatedly, so it is best to dig those out.
- Eventually, the seedbank in the soil will be exhausted without the introduction of new seeds by flowering plants, but this may take years depending on the longevity of the individual seeds.

Biological

- There are no biological control agents currently available for giant hogweed.

Chemical

- Chemical control options may differ for private, commercial and government agency users. Follow all label directions. Herbicides should only be applied at the rates and for the site conditions / land usage specified on the label.
- **Certain herbicides can not be used in aquatic areas or their buffers**. If herbicides are used, make sure that their use is allowed at your site. Contact your local noxious weed control program for control guidelines in your area.
- Several herbicides are recommended by the PNW Weed Control Handbook for hogweed control. For site specific herbicide recommendations, please contact the King County Noxious Weed Control Program.
- The addition of a suitable surfactant to the herbicide may improve the control results.
- Non-selective herbicides are effective but may damage grass and other vegetation. Treatment with a non-selective herbicide needs to be followed by re-seeding with grass. Without re-seeding, bare areas will be re-infested from the seed bank and by any missed plants.
- Selective herbicides that target only broadleaf plants may be used in grassy areas.

Additional Information

Legal Status in King County: **Class A** (non-native species designated for eradication throughout Washington). **The King County Noxious Weed Control Board requires property owners to eradicate giant hogweed on private and public lands throughout the county.** Also on the Federal Noxious Weed List as a Class A.

Local Distribution

Giant hogweed is found throughout Seattle and in Bellevue, Auburn, Bothell, Burien, Federal Way, Des Moines, Issaquah, Kent, Kirkland, Redmond, Lake Forest Park, Newcastle, Renton, Normandy Park, SeaTac, Shoreline, Tukwila, Vashon, Woodinville and a few more rural areas of the county. Most infestations are on urban residential properties but there are also infestations in city parks, open space areas, commercial properties, schools and churches, vacant lots, roadsides, railroads, ravines and along streams and rivers. Water bodies with infestations include the Duwamish River, Longfellow Creek, Thornton Creek and Miller Creek. Many parks are affected including Volunteer Park, Seward Park, Bhy Kracke Park, Lincoln Park, West Seattle Golf Course, Thorndyke Park, Shoreview Park, Woodland Park, Martha Washington Park, Burke-Gilman Trail, Interlaken Park, Washington Park Arboretum, Skyway Park, Frink Park, Mount Baker Park, Seola Park, Schmitz Park and Ravenna Park.

Impacts and History

Public Health Hazards

- Clear, watery sap in the leaves and stems contain glucosides called furanocoumarins that act as phototoxins. The phototoxin causes the skin to be hypersensitive to sunlight and burns and blisters can form when skin is exposed to light after coming in contact with giant hogweed sap.
- Symptoms of photosensitization include itchiness, redness, heat, swelling, and blistering that may last for many days, weeks, or even months. Excessive pigmentation, or hyper-pigmentation, of the skin in the affected area may remain for a year or more and occasionally precipitates recurrent dermatitis.
- Watery blisters are very slow to heal and in severe cases may require hospital treatment.
- People often get sap on their skin while clearing plants by hand or using a weed-whacker, machete, or other cutting tool without wearing proper protective equipment such as long sleeves, long pants, eye and face protection.
- Children are exposed when they use the long, hollow stems for spyglasses, blowguns, and swords.
- **If sap gets on the skin, immediately wash with soap and water, keep exposed skin out of the sun and treat as with a surface burn**.

Weed Ecology & Ecological Hazards

- Highly competitive and invasive plant due to quick, early-season growth, tolerance of shade and occasional flooding, tall flower stalk height allowing for efficient spread of seeds, ability to thrive in disturbance-related sites, seed viability beyond 7 years and ability to coexist with other widespread and successful weed species.
- By populating steep hillsides and stream banks, becomes an erosion hazard when it dies back in the winter, exposing the soil to winter rains. Also, the roots do not hold the soil as well as a healthy complex of native trees, shrubs and herbs.
- Seeds landing on nearby water can float for three days before becoming waterlogged and sinking, and can travel great distances, particularly during floods.
- Native to Caucasus Mountain region in southwest Asia, an area that lies between the Black and Caspian Seas. Introduced to the United Kingdom and Europe in the late nineteenth century and to the United States in the early twentieth century as a garden ornamental.

References

Turner, N.J. and Szczawinski, A.F. 1991. Common Poisonous Plants and Mushrooms of N. America.
PNW Extension Bulletin 429. 1992. Giant Hogweed
Pacific Northwest Weed Control Handbook. 2000. Oregon State University.
Washington State Noxious Weed Control Board. Written Findings. 1991

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